

REMARKS

Claims 32, 34, 36-48, 50, 51 and 58-62 are pending in this application. Claims 32, 35, 37, 40, 44, 50, 51 and 58-62 have been amended. No new matter has been introduced. Claims 35 and 49 have been canceled. The title has been amended to better depict the subject matter of the claimed invention.

Claims 32, 34, 36-38, 58, 59, 61 and 62 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Blatchford et al. (U.S. Patent No. 6,200,734) ("Blatchford"). This rejection is respectfully traversed.

The present invention relates to an integrated circuit structure which comprises multiple anti-reflective coatings. As such, amended independent claim 32 recites an "integrated circuit" comprising *inter alia* "a reflective layer having a reflective surface" and "a first anti-reflective coating over the reflective surface, the first coating having a first index of refraction, a first absorption, a first thickness, and an upper surface defining a first interface." Amended independent claim 32 also recites "a second anti-reflective coating over and in contact with said first anti-reflective coating, the second anti-reflective coating having a second index of refraction, a second absorption, a second thickness, and an upper surface defining a second interface." Amended independent claim 32 also recites that "the first index of refraction is different from the second index of refraction and the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined."

Amended independent claim 61 recites an "integrated circuit" comprising *inter alia* "a reflective layer" and "an etch layer comprising: a first anti-reflective coating

... having a first index of refraction, a first absorption, a first thickness, and an upper surface defining a first interface; and a second anti-reflective coating in contact with said first anti-reflective coating." Amended independent claim 61 also recites "the second anti-reflective coating having a second index of refraction, a second absorption, a second thickness, and an upper surface defining a second interface, wherein the first index of refraction is different from the second index of refraction." Amended independent claim 61 also recites that "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined."

Amended independent claim 62 recites an "integrated circuit" comprising *inter alia* "a reflective layer having a reflective surface," "a first anti-reflective coating ... having properties defining a first interface and having a first index of refraction" and "a second anti-reflective coating in contact with said first anti-reflective coating, the second anti-reflective coating having properties defining a second interface and having a second index of refraction." Amended independent claim 62 also recites "a third anti-reflective coating in contact with said second anti-reflective coating" and "having properties defining a third interface and having a third index of refraction, wherein the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction."

Blatchford relates to an anti-reflection coating that is "formed between the substrate and photoresist layer to alleviate the problems caused by non-uniform reflection at the substrate surface during exposure of the photoresist layer." (Abstract). Blatchford teaches that "[t]hree-layer and two-layer stacks are described for use with UV and i-line exposure." (Abstract).

Blatchford fails to anticipate the subject matter of claims 32, 34, 36-38, 58, 59, 61 and 62. Blatchford does not disclose, teach or suggest "a first anti-reflective coating" and "a second anti-reflective coating . . . in contact with said first anti-reflective coating" wherein "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined," as amended independent claims 32 and 61 recite.

Blatchford teaches that anti-reflecting coatings 13 and 14, which would arguably correspond to the first and second anti-reflective coatings of the claimed invention, are formed over layer 18, which would arguably correspond to the "reflective layer" of the claimed invention. (Col. 2, lines 13-30; Figures 1-2). However, Blatchford does not teach or suggest that "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of *all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined*," as in the claimed invention (emphasis added). Blatchford addresses the problems posed by the control of "feature size in the photoresist when the semiconductor substrate has varying topology" to achieve "optimum reflectivity control" (Col. 1, lines 18-67; col. 2, lines 1-23). If anything, Blatchford addresses the reflected radiation at the interface between layer of metal 18 and first deposited layer 13 (which would arguably correspond to the first interface of the claimed invention) and not the "the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface," as in the claimed invention.

Applicants point out that, while Blatchford is directed at limiting the reflection for the stepped topology of an integrated circuit, the present invention seeks

to eliminate this reflection *as well as the reflection from the interface between multiple DARC layers*. This problem is not addressed by Blatchford. Applicants affirm that the crux of the present invention is “providing a multiple layer anti-reflective coating” with “at least two interfaces from which radiation is reflected” and having an upper layer with “[t]he thickness, index of refraction and absorption value . . . chosen such that the amplitudes of the radiation reflected from the two interfaces are approximately equal, but the phase difference between the radiation is approximately 180 degrees so that the reflections cancel each other.” (Application at 4, lines 8-14; 17-21). Another critical aspect of the present invention is that, where “[t]here may also be radiation reflected from reflective surfaces which reside below the anti-reflective coating layers,” “the thicknesses, indices of refraction and absorption values are chosen such that the amplitudes and phase difference from the three sources of reflected radiation mutually cancel when combined.” (Application at 4, lines 21-26). In this manner, “the total reflected radiation may be greatly reduced.” (Application at 4, line 26). These aspects of the present invention relating to the interface between multiple DARC layers are not addressed by Blatchford.

Blatchford also fails to disclose, teach or suggest “a first anti-reflective coating” having a first index of refraction, “a second anti-reflective coating in contact with said first anti-reflective coating” having a second index of refraction and “a third anti-reflective coating” having a third index of refraction, “wherein the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction,” as amended independent claim 62 recites. Blatchford is silent about the index of refraction of the first deposited layer 13 but teaches that the index of refraction  $n_2$  corresponding to the second deposited layer 14 is “approximately 2.05” and “within the range 1.95 to 2.25” and that the index of refraction  $n_3$  corresponding to the second deposited layer 15 is “approximately 1.90” and “within the range 1.7 to 2.0.” (Col. 2,

lines 54-67; Col. 3, lines 1-7). Thus, Blatchford fails to disclose, teach or suggest that “the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction,” as amended independent claim 62 recites. For at least these reasons, Blatchford fails to anticipate all limitations of claims 32, 34, 36-38, 58, 59, 61 and 62, and withdrawal of the rejection of these claims is respectfully requested.

Claims 32, 34 and 60-62 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ohta et al. (U.S. Patent No. 6,268,295) (“Ohta”). This rejection is respectfully traversed.

Amended independent claim 60 recites an “integrated circuit” comprising *inter alia* “a reflective layer having a reflective surface,” “a first silicon dioxide layer over the reflective layer” and “a first anti-reflective coating over and in contact with the first silicon dioxide layer.” Amended independent claim 60 also recites “a second anti-reflective coating in contact with said first anti-reflective coating” and “a second silicon dioxide layer over the second anti-reflective coating.”

Ohta relates to a “method of manufacturing a semiconductor device” by “forming a first film over a semiconductor substrate, introducing a reaction gas including a dilution gas into a reaction atmosphere and then growing a antireflection film made of silicon nitride or silicon nitride oxide on the first film by a plasma chemical vapor deposition method in the reaction atmosphere” and “coating resist on the antireflection film directly or via a second film.” (Abstract). Ohta also teaches “patterning the resist via exposure and development, patterning the first film located in an area not covered with the resist by etching” and “removing the antireflection film by use of hydrofluoric acid after patterning of the first film.” (Abstract).

Ohta fails to disclose all limitations of claims 32, 34 and 60-62. Ohta fails to disclose, teach or suggest “a first anti-reflective coating over the reflective surface” and “a second anti-reflective coating *over and in contact with* said first anti-reflective coating,” as amended independent claim 32 recites (emphasis added). In Ohta, second antireflection film 45, which would arguably correspond to the “second anti-reflective coating” of the claimed invention, is spaced apart from first antireflection film 42, which would arguably correspond to the “first anti-reflective coating” of the claimed invention, by silicon oxide layer 43 and polysilicon layer 44. Thus, in Ohta, the second antireflection film 45 is not *over and in contact with* the first antireflection film 42, as in the claimed invention.

Ohta also fails to disclose, teach or suggest “a first silicon dioxide layer over the reflective layer,” “a first anti-reflective coating over and in contact with the first silicon dioxide layer” and “a second anti-reflective coating *in contact with* said first anti-reflective coating” and “a second silicon dioxide layer over the second anti-reflective coating,” as amended independent claim 60 recites (emphasis added). As noted above, in Ohta, second antireflection film 45, which would arguably correspond to the “second anti-reflective coating” of the claimed invention, is not “*in contact with*” the first antireflection film 42, which would arguably correspond to the “first anti-reflective coating” of the claimed invention. Ohta also fails to disclose, teach or suggest “an etch layer comprising: a first anti-reflective coating” and “a second anti-reflective coating *in contact with* said first anti-reflective coating” (claim 61) or “a first anti-reflective coating” and “a second anti-reflective coating *in contact with* said first anti-reflective coating” (claim 62) (emphasis added). For at least these reasons, Ohta fails to anticipate the subject matter of claims 32, 34 and 60-62, and withdrawal of the rejection of these claims is respectfully requested.

Claim 39 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Blatchford. This rejection is respectfully traversed.

Claim 39 depends on amended independent claim 32 and recites that "the first index of refraction is approximately 2.1, the second index of refraction is approximately 2.0, the first absorption is approximately 1.2, and the second absorption is approximately 0.3."

The subject matter of claim 39 would not have been obvious over Blatchford. Specifically, the Office Action fails to establish a *prima facie* case of obviousness. Courts have generally recognized that a showing of a *prima facie* case of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the reference teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all claim limitations. See e.g., In re Dembicczak, 175 F.3d 994 (Fed. Cir. 1999); In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998); Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996).

In the present case, Blatchford does not teach or suggest all limitations of amended independent claim 32. As noted above, Blatchford does not disclose, teach or suggest "a reflective layer," "a first anti-reflective coating," "a second anti-reflective coating . . . in contact with said first anti-reflective coating," wherein "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined," as amended independent claim 32 recites. For at least these reasons,

the Office Action fails to establish a *prima facie* case of obviousness, and withdrawal of the rejection of claim 39 is respectfully requested.

Claims 40-45, 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blatchford in view of Fukuda et al. (U.S. Patent No. 6,255,151) (“Fukuda”). This rejection is respectfully traversed.

Amended independent claim 40 recites a “memory cell” comprising *inter alia* “a structure . . . comprising at least two active areas formed in the substrate; a gate stack between the active areas; and a capacitor electrically coupled with one of the active areas.” Amended independent claim 40 also recites “a first anti-reflective coating over the structure, the first anti-reflective coating having a first index of refraction,” “a second anti-reflective coating . . . having a second index of refraction” and “a third anti-reflective coating in contact with said second anti-reflective coating, the third anti-reflective coating having a third index of refraction . . . wherein the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction.” Amended independent claim 40 also recites “an insulating layer over the third anti-reflective coating.”

Fukuda relates to a “steplike offset between a memory cell array region and a peripheral circuit region, which is caused by a capacitor C” and which is reduced by “an insulating film having a thickness substantially equal to the height of the capacitor C.” (Abstract). Fukuda teaches that “[w]iring or interconnection grooves are defined in the neighborhood of the surface of an insulating film whose surface is flattened by a CMP method” and that “connecting holes are defined in lower portions of the bottom faces of the interconnection grooves respectively.” (Abstract). Fukuda also teaches that “[s]econd layer interconnections containing copper are formed within the

interconnection grooves, and connecting portions containing copper are formed within the connecting holes." (Abstract).

The subject matter of claims 40-45, 47 and 48 would not have been obvious over Blatchford and Fukuda, whether considered alone or in combination. Again, the Office Action fails to establish a *prima facie* case of obviousness. Neither Blatchford nor Fukuda, alone or in combination, teaches or suggest all limitations of amended independent claim 40. Blatchford fails to teach or suggest a "memory cell" comprising "at least two active areas formed in the substrate" and "a gate stack between the active areas," much less a memory cell with "a first anti-reflective coating . . . having a first index of refraction," "a second anti-reflective coating . . . having a second index of refraction" and "a third anti-reflective coating in contact with said second anti-reflective coating, the third anti-reflective coating having a third index of refraction . . . wherein the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction." In Blatchford, the index of refraction  $n_2$  corresponding to the second deposited layer 14 is "approximately 2.05" and "within the range 1.95 to 2.25" and that the index of refraction  $n_3$  corresponding to the second deposited layer 15 is "approximately 1.90" and "within the range 1.7 to 2.0." (Col. 2, lines 54-67; Col. 3, lines 1-7). Thus, Blatchford fails to teach or suggest that "the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction," as amended independent claim 40 recites.

Fukuda is silent about an anti-reflective coating, much less about "a first anti-reflective coating . . . having a first index of refraction" and formed over "at least two active areas formed in the substrate" and "a gate stack between the active areas," "a second anti-reflective coating . . . having a second index of refraction" and "a third anti-reflective coating in contact with said second anti-reflective coating, the third anti-reflective coating having a third index of refraction," as amended independent claim 40

recites. Fukuda also fails to teach or suggest that “the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction,” as amended independent claim 40 further recites.

In addition, a person of ordinary skill in the art would not have been motivated to combine Blatchford with Fukuda to arrive at the claimed invention. Courts have generally held that, to establish a *prima facie* case of obviousness, “[I]t is insufficient that the prior art disclosed the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made by the inventor.” Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934, 15 U.S.P.Q.2d 1321, 1323 (Fed. Cir. 1990). This way, “the inquiry is not whether each element existed in the prior art, but whether the prior art made obvious the invention as a whole for which patentability is claimed.” Hartness Int’l, Inc. v. Simplimatic Engineering Co., 819 F.2d 1100, 1108, 2 U.S.P.Q.2d 1826, 1832 (Fed. Cir. 1987). Accordingly, a determination of obviousness “must involve more than indiscriminately combining prior art; a motivation or suggestion to combine must exist.” Pro-Mold & Tool Co., 75 F.3d at 1573.

In the present case, the crux of Blatchford is the formation of an anti-reflection coating between a substrate and a photoresist layer “to alleviate the problems caused by non-uniform reflection at the substrate surface during exposure of the photoresist layer.” (Abstract). On the other hand, the crux of Fukuda is the creation of an offset between the cell array and the peripheral circuit region of a memory cell by providing an insulating film within the peripheral region and having a thickness equal to the height of each capacitor. (Col. 1, lines 66-67; col. 2, lines 1-2). Thus, the only element which Blatchford and Fukuda have in common is the substrate on which their respective structures are formed. Accordingly, a person of ordinary skill in the art

would not have been motivated to combine Blatchford with Fukuda, and withdrawal of the rejection of claims 40-45, 47 and 48 is also respectfully requested.

Claim 46 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Blatchford in view of Fukuda and Chen et al. (U.S. Patent No. 6,140,179) ("Chen"). This rejection is respectfully traversed.

Claim 46 depends on amended independent claim 40 and recites that "the capacitors are container capacitors."

Chen relates to a "method of forming a crown capacitor for a DRAM cell." (Abstract). According to Chen, "[a]n etching method having different selectivity between the BPSG and silicon oxynitride layer is applied to form a sacrificial structure with a concanovenex sidewall." (Abstract). In this manner, "[u]sing the sacrificial structure as a mold, a high capacitance crown capacitor is obtained." (Abstract).

The subject matter of claim 46 would not have been obvious over Blatchford in view of Fukuda and Chen. Again, the Office Action fails to establish a *prima facie* case of obviousness. None of Blatchford, Fukuda and Chen, whether considered alone or in combination, teaches or suggests all limitations of amended independent claim 40. As noted above, Blatchford and Fukuda do not teach or suggest a memory cell comprising "a first anti-reflective coating . . . having a first index of refraction," "a second anti-reflective coating . . . having a second index of refraction" and "a third anti-reflective coating in contact with said second anti-reflective coating, the third anti-reflective coating having a third index of refraction . . . wherein the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction," as amended independent claim 40 recites.

Chen is also silent about any anti-reflective coatings, much less about “a first anti-reflective coating . . . having a first index of refraction” and formed over “at least two active areas formed in the substrate” and “a gate stack between the active areas,” “a second anti-reflective coating on at least a portion of the first anti-reflective coating, the second anti-reflective coating having a second index of refraction” and “a third anti-reflective coating in contact with said second anti-reflective coating, the third anti-reflective coating having a third index of refraction,” as amended independent claim 40 recites. Chen further fails to teach or suggest that “the second index of refraction is greater than the first index of refraction but smaller than the third index of refraction,” as amended independent claim 40 also recites.

Applicants also note that a person of ordinary skill in the art would not have been motivated to combine Blatchford with either Fukuda or Chen to arrive at the claimed invention. As noted above, the crux of Blatchford is the formation of an anti-reflection coating between a substrate and a photoresist layer “to alleviate the problems caused by non-uniform reflection at the substrate surface during exposure of the photoresist layer.” (Abstract). On the other hand, the crux of Fukuda is the creation of an offset between the memory cell array and the peripheral circuit region by providing an insulating film within the peripheral region and having a thickness equal to the height of each capacitor. (Col. 1, lines 66-67; col. 2, lines 1-2). The crux of Chen is the formation of a crown capacitor using a sacrificial layer formed of a “plurality of alternating BPSG layers and silicon oxynitride layers.” (Col. 2, lines 38-64). Accordingly, the only element which Blatchford, Fukuda and Chen have in common is the substrate on which their respective structures are formed. Thus, again, a person of ordinary skill in the art would not have been motivated to combine Blatchford with either Fukuda or Chen, and withdrawal of the rejection of claim 46 is also respectfully requested.

Claim 50 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Blatchford in view of Kim (U.S. Patent No. 6,258,691) ("Kim") and Fukuda. This rejection is respectfully traversed.

Amended independent claim 50 recites an "integrated circuit" comprising "at least one memory cell, the memory cell comprising: a structure on a substrate, the structure comprising: at least two active areas formed in the substrate; a gate stack between the active areas" and "a capacitor in electrical contact with one of the active areas." Amended independent claim 50 also recites "an etch stop layer comprising: a first anti-reflective coating over the structure, the first anti-reflective coating having a first index of refraction" and "a second anti-reflective coating over and in contact with at least a portion of the first anti-reflective coating, the second anti-reflective coating having a second index of refraction." Amended independent claim 50 further recites that "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined."

Kim relates to a "method for fabricating a cylindrical capacitor that exceeds photolithographic resolution." (Abstract). Kim teaches that "[t]he capacitor is formed by partially etching the storage node opening, thereby reducing the distance between adjacent openings defined by the photolithographic process." (Abstract). Kim further teaches that "[t]he openings defined by the photolithographic process is enlarged by wet etching the sidewalls of the openings by at least the same thickness as that of a subsequently formed conductive layer for storage node formation" and that "[c]ontact plugs that are electrically connected to the bottom of the cylindrical storage nodes protrude from the top surface of an insulating layer in order to increase process margins and decrease contact resistance." (Abstract).

The subject matter of amended independent claim 50 would not have been obvious over Blatchford in view of Kim and Fukuda. None of Blatchford, Kim and Fukuda, whether considered alone or in combination, teaches or suggests all limitations of amended independent claim 50. Blatchford does not teach or suggest an "integrated circuit" comprising a structure having "at least two active areas formed in the substrate; a gate stack between the active areas" and "a capacitor," much less "an etch stop layer comprising: a first anti-reflective coating over the structure," "a second anti-reflective coating over and in contact with at least a portion of the first anti-reflective coating," wherein "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined," as amended independent claim 50 recites.

Blatchford addresses the reflected radiation at the interface between layer of metal 18 and first deposited layer 13 (which would arguably correspond to the first interface of the claimed invention) and not the "reflected radiation which reside at or below the second interface," as in the claimed invention. Kim and Fukuda also fail to teach or suggest an anti-reflective coating, much less a first and second anti-reflective coatings as part of "an etch stop layer," as amended independent claim 50 recites.

Applicants also note that, again, a person of ordinary skill in the art would not have been motivated to combine Blatchford with either Kim or Fukuda to arrive at the subject matter of amended independent claim 50. As noted above, the crux of Blatchford is the formation of an anti-reflection coating between a substrate and a photoresist layer "to alleviate the problems caused by non-uniform reflection at the substrate surface during exposure of the photoresist layer." (Abstract). On the other hand, the crux of Kim is the formation of a cylindrical capacitor while the crux of

Fukuda is achieving an offset between the cell array and the peripheral circuit region of a memory cell by providing an insulating film within the peripheral region and having a thickness equal to the height of each capacitor. (Col. 1, lines 66-67; col. 2, lines 1-2). Thus, again, other than the substrate on which their respective structures are formed, there is nothing that Blatchford, Kim and Fukuda have in common. For at least these reasons, withdrawal of the rejection of claim 50 is also respectfully requested.

Claim 51 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Blatchford in view of Fukuda and Podlesny et al. (U.S. Patent No. 5,724,299) ("Podlesny"). This rejection is respectfully traversed.

Amended independent claim 51 recites a "computer system" comprising *inter alia* "a processor" and "a memory, the memory comprising at least one memory cell, the memory cell comprising: a structure on a substrate, the structure comprising: at least two active areas formed in the substrate; a gate stack between the active areas" and "a capacitor in electrical contact with one of the active areas." Amended independent claim 51 also recites "a first anti-reflective coating over the structure" and "a second anti-reflective coating formed in contact with the first anti-reflective coating" wherein "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined."

Podlesny relates to a "multiport register file memory" that includes "a cross-coupled sense amplifier as a storage element." (Abstract). According to Podlesny, "[a] buffered switching circuit provides a voltage potential to the storage element in response to a write enable signal for switching-on/off the storage element" so that

"[e]ach storage element provides two storage nodes which are coupled to corresponding switched bit lines." (Abstract).

The subject matter of amended independent claim 51 would not have been obvious over Blatchford in view of Fukuda and Podlesny. Blatchford, Fukuda and Podlesny, whether considered alone or in combination, fail to teach or suggest all limitations of amended independent claim 51. Blatchford does not teach or suggest a "computer system" comprising a memory having "at least two active areas formed in the substrate; a gate stack between the active areas" and "a capacitor," much less "a first anti-reflective coating," "a second anti-reflective coating formed in contact with the first anti-reflective coating," wherein "the indices of refraction, absorptions, and thicknesses of the first and second anti-reflective coatings are chosen such that the amplitudes and phase differences of all sources of reflected radiation which reside at or below the second interface substantially mutually cancel when combined," as amended independent claim 51 recites. Fukuda and Podlesny also fail to teach or suggest an anti-reflective coating, much less a first and second anti-reflective coatings as part of a memory of a computer system, as amended independent claim 50 recites.

As in the above rejections, Applicants also point out that one of ordinary skill in the art would not have been motivated to combine Blatchford with either Fukuda or Podlesny to arrive at the subject matter of amended independent claim 51. Blatchford addresses "problems caused by non-uniform reflection at the substrate surface during exposure of the photoresist layer" (abstract), whereas Fukuda addresses the creation of an offset between the cell array and the peripheral circuit region of a memory cell while Podlesny addresses the formation of a cross-coupled sense amplifier as a storage element. Thus, again, the only element which all three references have in common is the substrate on which their respective structures are formed. For at least these reasons, withdrawal of the rejection of claim 51 is also respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

By 

Thomas J. D'Amico

Registration No.: 28,371

Gabriela I. Coman

Registration No.: 50,515

DICKSTEIN SHAPIRO MORIN &

OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicants